

## LISTING OF THE CLAIMS:

This listing of the claims will replace all prior versions and listings of claims in the Application.

1-24. (Cancelled)

25. (Currently Amended) A system for producing ~~modeling~~ a sound field ~~produced~~ by a ~~sound source that generates a radiating sound field that comprises predetermined parameters, the system comprising:~~

means for receiving N signals that correspond to a received sound field emanating outwardly from within a predetermined geometric surface, wherein each of the N signals indicates one or more parameters of the received sound field at a separate one of N predetermined locations on the predetermined geometric surface;

~~N transducers, arranged to at least partially surround the sound source, for capturing the sound field and generating N signals that correspond to the captured sound field;~~

~~means for modeling the sound field based on at least some of the N signals, including selected ones of the predetermined parameters; and~~

~~means for selectively modifying one or more parameters of selected ones of the N signals to produce a modified sound field; and~~

M transducers, disposed arranged to at least partially within the predetermined geometric surface and oriented to emit sound outwardly through the geometric surface surround an equivalent sound source, for emitting the modified sound field, the M

~~transducers being oriented away from the equivalent sound source so as to emit the modified sound field outwardly from the equivalent sound source;~~

means for driving the M transducers to emit an emitted sound field outwardly through the geometric surface such that one or more parameters of the emitted sound field at the N predetermined locations on the predetermined geometric surface correspond to the one or more parameters of the received sound field at the N predetermined locations on the predetermined geometric surface.

26. (Currently Amended) The system of claim 25, wherein the means for driving the M transducers comprises:

means for determining M inputs, wherein each of the M inputs corresponds to one of the M transducers; and

means for providing the M inputs to the corresponding ones of the M transducers  
~~further comprising driver means for receiving N signals corresponding to the modified sound field and generating M signals to drive the reproduction of the modified sound field by the M transducers.~~

27. (Currently Amended) The system of claim 25 26, further comprising wherein the driver means is operable to selectively modify modifying at least one of the one or more of the parameters of selected ones of the N signals that correspond to the received modified sound field at one or more of the N predetermined locations on the predetermined geometric surface to generate the M signals.

28. (Currently Amended) The system of claim 27 ~~26~~, wherein the at least one of the one or more parameters of the received sound filed at one or more of the N predetermine locations that is selectively modified comprises one or both of a relative amplitude and an absolute amplitude ~~driver means is operable to independently modify one or more parameters of the selected ones of the N signals that correspond to the modified sound field to generate the M signals.~~

29. (Currently Amended) The system of claim 27 ~~25~~, wherein the at least one of the one or more parameters of the received sound filed at one or more of the N predetermine locations that is selectively modified comprises a directionality means ~~for selectively modifying is operable to independently modify one or more parameters of the selected ones of the N signals.~~

30. (Currently Amended) The system of claim 25, further comprising storing means for storing the M inputs ~~modeled sound field.~~

31. (Previously Presented) The system of claim 25, wherein M equals N.

32. (Currently Amended) The system of claim 25 ~~26~~, further comprising storing means for storing the ~~modified sound field, wherein the driver means receives the N signals corresponding to the modified sound field from the storing means.~~

33. (Currently Amended) The system of claim 26 25, wherein the means for determining the M inputs determines the M inputs based at least in part on one or more of a position of one or more of the M transducers, an orientation of one or more of the M transducers, or an output profile of one or more of the M transducers selectively ~~modifying is operable to modify one or more parameters of the selected ones of the N signals based on at least one of a user preference, a loudspeaker compatibility, a predetermined module, and a preferred output arrangement.~~

34. (Currently Amended) The system of claim 26 28, wherein the means for determining the M inputs determines the M inputs based at least in part on one or more of driver means is operable to modify one or more parameters of the selected ones of the N signals corresponding to the modified sound field based on at least one of a user preference, a user selection, or a loudspeaker compatibility, a predetermined module, ~~and a preferred output arrangement.~~

35. (Currently Amended) The system of claim 25, wherein the means for determining the M inputs determines the M inputs based at least in part on one or more of selectively modifying is operable to modify one or more parameters of the selected ones of the N signals based on at least one of a recording environment or and a ~~playback environment.~~

36. (Previously Presented) The system of claim 28, wherein M is greater than or less than N ~~the driver means is operable to modify one or more parameters of the~~

~~selected ones of the N signals corresponding to the modified sound field based on at least one of a recording environment and a playback environment.~~

37. (Currently Amended) A method for producing ~~modeling~~ a sound field generated by a sound source that generates a radiating sound field that comprises one or more predetermined parameters, the method comprising:

~~capturing the sound field using N transducers that are arranged to at least partially surround the sound source;~~

~~generating~~ obtaining N signals that correspond to an obtained ~~the captured~~ sound field emanating outwardly from within a predetermined geometric surface, wherein each of the N signals indicates one or more parameters of the obtained sound field at a separate one of N predetermined locations on the predetermined geometric surface;

positioning M transducers at least partially within the predetermined geometric surface;

orienting the M transducers to emit sound outwardly through the geometric surface; and

driving the M transducers to emit an emitted sound field outwardly through the geometric surface such that one or more of parameters of the emitted sound field at the N predetermined locations on the predetermined geometric surface correspond to the one or more parameters of the obtained sound field at the N predetermined locations on the predetermined geometric surface

~~modeling the sound field based on at least some of the N signals, including selected ones of the predetermined parameters;~~

~~— modifying one or more parameters of selected ones of the N signals to produce a modified sound field; and~~

~~— emitting the modified sound field using M transducers that are arranged to at least partially surround an equivalent sound source, the M transducers being oriented away from the equivalent sound source so as to emit the modified sound field outwardly from the equivalent sound source.~~

38. (Currently Amended) The method of claim 37, further comprising:

determining M inputs, wherein each of the M inputs corresponds to one of the M transducers receiving N signals corresponding to the modified sound field; and

providing the M inputs to the corresponding ones of the M transducers driving the  
~~emission of the modified sound field by the M transducers based on the received N~~  
~~signals.~~

39. (Currently Amended) The method of claim 37 ~~38~~, further comprising selectively and independently modifying at least one of the one or more parameters of selected ones of the received N signals that correspond to the obtained modified sound field at one or more of the N predetermined locations on the predetermined geometric surface.

40. (Currently Amended) The method of claim 38 ~~37~~, further comprising storing the M inputs ~~modeled sound field.~~

41. (Currently Amended) The method of claim 37, further comprising storing the N signals ~~modified sound field~~.

42. (Currently Amended) The method of claim ~~39~~ 37, wherein selectively modifying the at least one of the one or more parameters of the obtained sound field ~~selected ones of the N signals~~ comprises independently modifying one or more parameters of ~~the selected ones of the N signals~~.

43. (Currently Amended) The method of claim ~~39~~ 37, wherein selectively modifying the at least one of the one or more parameters of the obtained sound field ~~selected ones of the N signals~~ comprises modifying one or more parameters of an absolute volume or a relative volume ~~the selected ones of the N signals based on at least one of a user preference, a loudspeaker compatibility, a predetermined module, and a preferred output arrangement~~.

44. (Currently Amended) The method of claim 39, wherein selectively modifying the at least one of the one or more parameters of the obtained ~~selected ones of the received N signals corresponding to the modified sound field~~ comprises modifying one or more parameters of the obtained ~~selected ones of the received N signals corresponding to the modified sound field~~ based on at least one or more of a user preference, a loudspeaker compatibility, a predetermined module, or ~~and~~ a preferred output arrangement.

45. (Currently Amended) The method of claim ~~39~~ 37, wherein modifying the at least one of the one or more parameters of the obtained sound field ~~selected ones of the N~~ signals comprises modifying one or more parameters of the obtained sound field ~~selected ones of the N~~ signals based on at least one or more of a recording environment or ~~and~~ a playback environment.

46. (Currently Amended) The method of claim 39, wherein M is less than or greater than N ~~modifying one or more parameters of the selected ones of the received N signals corresponding to the modified sound field comprises modifying one or more parameters of the selected ones of the N signals corresponding to the modified sound field based on at least one of a recording environment and a playback environment.~~

47. (Previously Presented) The method of claim 37, wherein M equals N.